

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/577,613A
Source: FWO
Date Processed by STIC: 12/21/06

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/577,613A

CRF Edit Date: 12/21/06
Edited by: h

____ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

____ Corrected the SEQ ID NO. Sequence numbers edited were:

____ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

____ Deleted: ____ invalid beginning/end-of-file text ; ____ page numbers

____ Inserted mandatory headings/numeric identifiers, specifically:

____ Moved responses to same line as heading/numeric identifier, specifically:

✓
____ Other:
moved prior application number from invitation
title line to prior application data section



IFWO

RAW SEQUENCE LISTING

DATE: 12/21/2006

PATENT APPLICATION: US/10/577,613A

TIME: 10:27:51

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\12212006\J577613A.raw

3 <110> APPLICANT: Cherkasky, Alexander
 5 <120> TITLE OF INVENTION: CHERKASKY PROTEINS CONTAINING ANTIBODY-,
 6 ANTIGEN- AND MICROTUBULE-BINDING REGIONS AND IMMUNE
 7 RESPONSE-TRIGGERING REGIONS
 9 <130> FILE REFERENCE: -
 11 <140> CURRENT APPLICATION NUMBER: US/10/577,613A
 C--> 12 <141> CURRENT FILING DATE: 2006-04-28
 14 <150> PRIOR APPLICATION NUMBER: PCT/IB 2004/003536
 15 <151> PRIOR FILING DATE: 2004-10-28
 17 <160> NUMBER OF SEQ ID NOS: 14
 19 <170> SOFTWARE: PatentIn version 3.4
 21 <210> SEQ ID NO: 1
 22 <211> LENGTH: 676
 23 <212> TYPE: PRT
 24 <213> ORGANISM: Artificial
 26 <220> FEATURE:
 27 <223> OTHER INFORMATION: 1a SPA-5G-gephyrin
 30 <220> FEATURE:
 W--> 31 <221> NAME/KEY: FUSION_PRT
 32 <222> LOCATION: (1)..(676)
 33 <223> OTHER INFORMATION: fusion protein Staph. aureus Protein A and H. sapiens
 gephyrin
 35 <400> SEQUENCE: 1
 37 Ala Ala Gln His Asp Glu Ala Gln Gln Asn Ala Phe Tyr Gln Val Leu
 38 1 5 10 15
 41 Asn Met Pro Asn Leu Asn Ala Asp Gln Arg Asn Gly Phe Ile Gln Ser
 42 20 25 30
 45 Leu Lys Asp Asp Pro Ser Gln Ser Ala Asn Val Leu Gly Glu Ala Lys
 46 35 40 45
 49 Lys Leu Asn Glu Ser Gln Ala Pro Lys Ala Asp Asn Asn Phe Asn Lys
 50 50 55 60
 53 Glu Gln Gln Asn Ala Phe Tyr Glu Ile Leu Asn Met Pro Asn Leu Asn
 54 65 70 75 80
 57 Glu Glu Gln Arg Asn Gly Phe Ile Gln Ser Leu Lys Asp Asp Pro Ser
 58 85 90 95
 61 Gln Ser Ala Asn Leu Leu Ser Glu Ala Lys Lys Leu Asn Glu Ser Gln
 62 100 105 110
 65 Ala Pro Lys Ala Asp Asn Lys Phe Asn Lys Glu Gln Gln Asn Ala Phe
 66 115 120 125
 69 Tyr Glu Ile Leu His Leu Pro Asn Leu Asn Glu Glu Gln Arg Asn Gly
 70 130 135 140
 73 Phe Ile Gln Ser Leu Lys Asp Asp Pro Ser Gln Ser Ala Asn Leu Leu
 74 145 150 155 160
 77 Ala Glu Ala Lys Lys Leu Asn Asp Ala Gln Ala Pro Lys Ala Asp Asn

RAW SEQUENCE LISTING

DATE: 12/21/2006

PATENT APPLICATION: US/10/577,613A

TIME: 10:27:51

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\12212006\J577613A.raw

78		165		170		175										
81	Lys	Phe	Asn	Lys	Glu	Gln	Gln	Asn	Ala	Phe	Tyr	Glu	Ile	Leu	His	Leu
82			180				185							190		
85	Pro	Asn	Leu	Thr	Glu	Glu	Gln	Arg	Asn	Gly	Phe	Ile	Gln	Ser	Leu	Lys
86			195				200							205		
89	Asp	Asp	Pro	Ser	Val	Ser	Lys	Glu	Ile	Leu	Ala	Glu	Ala	Lys	Lys	Leu
90		210					215						220			
93	Asn	Asp	Ala	Gln	Ala	Pro	Lys	Glu	Glu	Asp	Asn	Asn	Lys	Pro	Gly	Lys
94	225					230				235					240	
97	Glu	Asp	Gly	Asn	Lys	Pro	Gly	Lys	Glu	Asp	Gly	Asn	Gly	Gly	Gly	Gly
98			245				250							255		
101	Gly	Met	Ser	Pro	Phe	Pro	Leu	Thr	Ser	Met	Asp	Lys	Ala	Phe	Ile	Thr
102			260						265					270		
105	Val	Leu	Glu	Met	Thr	Pro	Val	Leu	Gly	Thr	Glu	Ile	Ile	Asn	Tyr	Arg
106			275					280						285		
109	Asp	Gly	Met	Gly	Arg	Val	Leu	Ala	Gln	Asp	Val	Tyr	Ala	Lys	Asp	Asn
110		290					295					300				
113	Leu	Pro	Pro	Phe	Pro	Ala	Ser	Val	Lys	Asp	Gly	Tyr	Ala	Val	Arg	Ala
114	305					310					315				320	
117	Ala	Asp	Gly	Pro	Gly	Asp	Arg	Phe	Ile	Ile	Gly	Glu	Ser	Gln	Ala	Gly
118				325						330					335	
121	Glu	Gln	Pro	Thr	Gln	Thr	Val	Met	Pro	Gly	Gln	Val	Met	Arg	Val	Thr
122			340						345					350		
125	Thr	Gly	Ala	Pro	Ile	Pro	Cys	Gly	Ala	Asp	Ala	Val	Val	Gln	Val	Glu
126			355					360						365		
129	Asp	Thr	Glu	Leu	Ile	Arg	Glu	Ser	Asp	Asp	Gly	Thr	Glu	Glu	Leu	Glu
130		370					375					380				
133	Val	Arg	Ile	Leu	Val	Gln	Ala	Arg	Pro	Gly	Gln	Asp	Ile	Arg	Pro	Ile
134	385					390					395				400	
137	Gly	His	Asp	Ile	Lys	Arg	Gly	Glu	Cys	Val	Leu	Ala	Lys	Gly	Thr	His
138				405						410					415	
141	Met	Gly	Pro	Ser	Glu	Ile	Gly	Leu	Leu	Ala	Thr	Val	Gly	Val	Thr	Glu
142			420						425					430		
145	Val	Glu	Val	Asn	Lys	Phe	Pro	Val	Val	Ala	Val	Met	Ser	Thr	Gly	Asn
146			435					440						445		
149	Glu	Leu	Leu	Asn	Pro	Glu	Asp	Asp	Leu	Leu	Pro	Gly	Lys	Ile	Arg	Asp
150		450					455					460				
153	Ser	Asn	Arg	Ser	Thr	Leu	Leu	Ala	Thr	Ile	Gln	Glu	His	Gly	Tyr	Pro
154	465					470					475				480	
157	Thr	Ile	Asn	Leu	Gly	Ile	Val	Gly	Asp	Asn	Pro	Asp	Asp	Leu	Leu	Asn
158				485						490					495	
161	Ala	Leu	Asn	Glu	Gly	Ile	Ser	Arg	Ala	Asp	Val	Ile	Ile	Thr	Ser	Gly
162			500						505					510		
165	Gly	Val	Ser	Met	Gly	Glu	Lys	Asp	Tyr	Leu	Lys	Gln	Val	Leu	Asp	Ile
166			515					520						525		
169	Asp	Leu	His	Ala	Gln	Ile	His	Phe	Gly	Arg	Val	Phe	Met	Lys	Pro	Gly
170		530					535					540				
173	Leu	Pro	Thr	Thr	Phe	Ala	Thr	Leu	Asp	Ile	Asp	Gly	Val	Arg	Lys	Ile
174	545				550						555				560	

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/577,613A

DATE: 12/21/2006

TIME: 10:27:51

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\12212006\J577613A.raw

```

177 Ile Phe Ala Leu Pro Gly Asn Pro Val Ser Ala Val Val Thr Cys Asn
178                               565                               570                               575
181 Leu Phe Val Val Pro Ala Leu Arg Lys Met Gln Gly Ile Leu Asp Pro
182                               580                               585                               590
185 Arg Pro Thr Ile Ile Lys Ala Arg Leu Ser Cys Asp Val Lys Leu Asp
186                               595                               600                               605
189 Pro Arg Pro Glu Tyr His Arg Cys Ile Leu Thr Trp His His Gln Glu
190                               610                               615                               620
193 Pro Leu Pro Trp Ala Gln Ser Thr Gly Asn Gln Met Ser Ser Arg Leu
194 625                               630                               635                               640
197 Met Ser Met Arg Ser Ala Asn Gly Leu Leu Met Leu Pro Pro Lys Thr
198                               645                               650                               655
201 Glu Gln Tyr Val Glu Leu His Lys Gly Glu Val Val Asp Val Met Val
202                               660                               665                               670
205 Ile Gly Arg Leu
206                               675

```

209 <210> SEQ ID NO: 2

210 <211> LENGTH: 2092

211 <212> TYPE: DNA

212 <213> ORGANISM: Artificial

214 <220> FEATURE:

215 <223> OTHER INFORMATION: 1b SPA-5G-gephyrin

218 <220> FEATURE:

219 <221> NAME/KEY: misc_recomb

220 <222> LOCATION: (1)..(2092)

221 <223> OTHER INFORMATION: nucleic acid encoding Staph. aureus Protein A and H. sapiens
 222 gephyrin fusion prt

224 <400> SEQUENCE: 2

```

225 tgctgcgcaa cacgatgaag ctcaacaaaa cgcttttttat caagtcttaa atatgcctaa      60
227 cttaaagtct gatcaacgca atggtttttat ccaagcctt aaagatgatc caagccaaag      120
229 tgctaacggt ttaggtgaag ctaaaaaaatt aaacgaatct caagcaccga aagctgacaa      180
231 caatttcaac aaagaacaac aaaatgcttt ctatgaaatc ttgaacatgc ctaacttgaa      240
233 cgaagaacaa cgcaatgggt tcatccaaag cttaaaagat gacccaagtc aaagtgcctaa      300
235 cctattgtca gaagctaaaa agttaaatga atctcaagca ccgaaagcgg ataacaaatt      360
237 caacaaagaa caacaaaatg ctttctatga aatcttacat ttacctaaact taaacgaaga      420
239 acaacgcaat ggtttcatcc aaagcctaaa agatgaccca agccaaagcg ctaacctttt      480
241 agcagaagct aaaaagctaa atgatgcaca agcaccaaaa gctgacaaca aattcaacaa      540
243 agaacaacaa aatgctttct atgaaatttt acattttacct aacttaactg aagagcaacg      600
245 taacggcttc atccaaagcc ttaaagacga tccttcagtg agcaaagaaa ttttagcaga      660
247 agctaaaaag ctaaacgatg ctcaagcacc aaaagaggaa gacaacaaca aacctggtaa      720
249 agaagacggc aacaaacctg gcaaagaaga cggtaacggc ggcggcggcg gcgtttaggt      780
251 cacagtgctg tcgatatcac caaggtggct agaagacatc gcatgtctcc ttttcctctg      840
253 acatctatgg acaaagcctt tatcacagtc ctggagatga ctccggtgct tgggacagaa      900
255 atcatcaatt accgagatgg aatggggcga gtccttgctc aagatgtata tgcaaaagac      960
257 aattttacccc ccttcccagc atcagtaaaa gatggctatg ctgtccgagc tgctgatggc     1020
259 ccaggagatc gtttcatcat tggggaatcc caagctgggtg aacagccaac tcagacagta     1080
261 atgccaggac aagtcatgcg gggtacaaca ggtgctccaa taccctgcgg tgctgatgca     1140
263 gtagtacaag tggaagatac cgaacttatc agggaatcag atgatggcac tgaagaactt     1200
265 gaagtgcgaa ttctggtgca agctcggcca ggccaagata tcagacccat cggccatgac     1260

```

RAW SEQUENCE LISTING

DATE: 12/21/2006

PATENT APPLICATION: US/10/577,613A

TIME: 10:27:51

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\12212006\J577613A.raw

```

267 attaaaagag gggaatgtgt tttggccaaa ggaaccacaca tgggcccctc agagattggt 1320
269 cttctggcaa ctgtaggtgt cacagagggt gaagttaata agtttccagt ggttgcagtc 1380
271 atgtcaacag ggaatgagct gctaaatcct gaagatgacc tcttaccagg gaagattcga 1440
273 gacagcaatc gttcaactct tctagcaaca attcaggaac atgggttacc cacgatcaac 1500
275 ttgggtattg taggagacaa cccagatgac ttactcaatg ccttgaatga gggtatcagt 1560
277 cgtgctgatg tcatcatcac atcaggggggt gtatccatgg gggaaaagga ctatctcaag 1620
279 caggtgctgg acattgatct tcatgctcag atccattttg gcagggtttt tatgaaacca 1680
281 ggcttgccaa caacatttgc aactttggat attgatgggt taagaaaaat aatctttgca 1740
283 ctacctggga atcctgtatc ggctgtggtc acctgcaatc tctttgttgt gcctgcactg 1800
285 aggaaaatgc agggcatctt ggatcctcgg ccaaccatca tcaaagcaag gttatcatgt 1860
287 gatgtaaaac ttgatcctcg tccagaatac catcgggtga tactaacttg gcatcaccaa 1920
289 gaaccactac cttgggcaca gagtacaggt aatcaaata gaagccgtct gatgagcatg 1980
291 cgcagtgcc aatggattgt gatgctacct ccaaagacag aacagtacgt ggagctccac 2040
293 aaaggcgagg tgggtggatgt catggtcatt ggacggctat gatggtcacc ag 2092

```

296 <210> SEQ ID NO: 3

297 <211> LENGTH: 300

298 <212> TYPE: PRT

299 <213> ORGANISM: Artificial

301 <220> FEATURE:

302 <223> OTHER INFORMATION: 2a SPA-5G-MBP

305 <220> FEATURE:

W--> 306 <221> NAME/KEY: FUSION_PRT

307 <222> LOCATION: (1)..(300)

308 <223> OTHER INFORMATION: Fusion Protein of Staph. aureus Protein A and H. sapiens MBP

310 <220> FEATURE:

311 <221> NAME/KEY: MISC_FEATURE

312 <222> LOCATION: (264)..(264)

313 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

315 <220> FEATURE:

316 <221> NAME/KEY: MISC_FEATURE

317 <222> LOCATION: (278)..(278)

318 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

320 <220> FEATURE:

321 <221> NAME/KEY: MISC_FEATURE

322 <222> LOCATION: (281)..(281)

323 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

325 <400> SEQUENCE: 3

327 Ala Ala Gln His Asp Glu Ala Gln Gln Asn Ala Phe Tyr Gln Val Leu

328 1 5 10 15

331 Asn Met Pro Asn Leu Asn Ala Asp Gln Arg Asn Gly Phe Ile Gln Ser

332 20 25 30

335 Leu Lys Asp Asp Pro Ser Gln Ser Ala Asn Val Leu Gly Glu Ala Lys

336 35 40 45

339 Lys Leu Asn Glu Ser Gln Ala Pro Lys Ala Asp Asn Asn Phe Asn Lys

340 50 55 60

343 Glu Gln Gln Asn Ala Phe Tyr Glu Ile Leu Asn Met Pro Asn Leu Asn

344 65 70 75 80

347 Glu Glu Gln Arg Asn Gly Phe Ile Gln Ser Leu Lys Asp Asp Pro Ser

348 85 90 95

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/577,613A

DATE: 12/21/2006

TIME: 10:27:51

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\12212006\J577613A.raw

```

351 Gln Ser Ala Asn Leu Leu Ser Glu Ala Lys Lys Leu Asn Glu Ser Gln
352          100          105          110
355 Ala Pro Lys Ala Asp Asn Lys Phe Asn Lys Glu Gln Gln Asn Ala Phe
356          115          120          125
359 Tyr Glu Ile Leu His Leu Pro Asn Leu Asn Glu Glu Gln Arg Asn Gly
360          130          135          140
363 Phe Ile Gln Ser Leu Lys Asp Asp Pro Ser Gln Ser Ala Asn Leu Leu
364 145          150          155          160
367 Ala Glu Ala Lys Lys Leu Asn Asp Ala Gln Ala Pro Lys Ala Asp Asn
368          165          170          175
371 Lys Phe Asn Lys Glu Gln Gln Asn Ala Phe Tyr Glu Ile Leu His Leu
372          180          185          190
375 Pro Asn Leu Thr Glu Glu Gln Arg Asn Gly Phe Ile Gln Ser Leu Lys
376          195          200          205
379 Asp Asp Pro Ser Val Ser Lys Glu Ile Leu Ala Glu Ala Lys Lys Leu
380          210          215          220
383 Asn Asp Ala Gln Ala Pro Lys Glu Glu Asp Asn Asn Lys Pro Gly Lys
384 225          230          235          240
387 Glu Asp Gly Asn Lys Pro Gly Lys Glu Asp Gly Asn Gly Gly Gly Gly
388          245          250          255
W--> 391 Gly Ala Ala Ala Ser Thr Ala Xaa Ala Ser Thr Ala Lys Glu Thr Ala
392          260          265          270
395 Glu Ala Val Ala Asp Xaa Ile Leu Xaa Lys Ala Gly Pro Leu Val Ala
396          275          280          285
399 Val Ser Ala Val Ala Leu Asp Ile Thr Ala Tyr Pro
400          290          295          300
403 <210> SEQ ID NO: 4
404 <211> LENGTH: 912
405 <212> TYPE: DNA
406 <213> ORGANISM: Artificial
408 <220> FEATURE:
409 <223> OTHER INFORMATION: 2b SPA-5g-MBP
412 <220> FEATURE:
413 <221> NAME/KEY: misc_recomb
414 <222> LOCATION: (1)..(912)
415 <223> OTHER INFORMATION: nucleic acid encoding Staph. aureus Protein A and H. sapiens
MBP
416          fusion prt
418 <220> FEATURE:
419 <221> NAME/KEY: misc_feature
420 <222> LOCATION: (792)..(792)
421 <223> OTHER INFORMATION: n is a, c, g, t or u
423 <220> FEATURE:
424 <221> NAME/KEY: misc_feature
425 <222> LOCATION: (835)..(835)
426 <223> OTHER INFORMATION: n is a, c, g, t or u
428 <220> FEATURE:
429 <221> NAME/KEY: misc_feature
430 <222> LOCATION: (844)..(844)
431 <223> OTHER INFORMATION: n is a, c, g, t or u

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/577,613A

DATE: 12/21/2006
TIME: 10:27:52

Input Set : A:\PTO.AMC.txt
Output Set: N:\CRF4\12212006\J577613A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; Xaa Pos. 264,278,281
Seq#:4; N Pos. 792,835,844
Seq#:8; N Pos. 488,531,540
Seq#:9; N Pos. 440,483,492
Seq#:12; N Pos. 792,835,844

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14

VERIFICATION SUMMARY

DATE: 12/21/2006

PATENT APPLICATION: US/10/577,613A

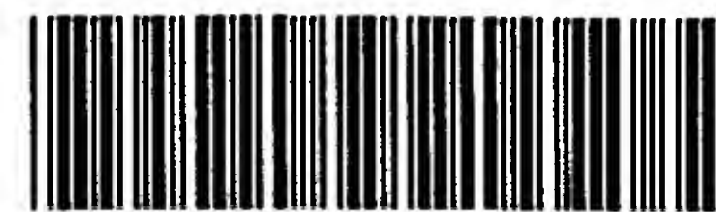
TIME: 10:27:52

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\12212006\J577613A.raw

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:31 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:1
L:306 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:3
L:391 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:256
M:341 Repeated in SeqNo=3
L:460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:780
M:341 Repeated in SeqNo=4
L:859 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:480
L:935 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:420
M:341 Repeated in SeqNo=9
L:1317 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:780
M:341 Repeated in SeqNo=12

Raw Sequence Listing before editing (for reference only)



IFWO

RAW SEQUENCE LISTING

DATE: 12/19/2006

PATENT APPLICATION: US/10/577,613A

TIME: 10:53:57

Input Set : A:\csequence listing.txt

Output Set: N:\CRF4\12192006\J577613A.raw

3 <110> APPLICANT: Cherkasky, Alexander
 5 <120> TITLE OF INVENTION: PCT/IB 2004/003536 CHERKASKY PROTEINS CONTAINING ANTIBODY-,
 6 ANTIGEN- AND MICROTUBULE-BINDING REGIONS AND IMMUNE
 7 RESPONSE-TRIGGERING REGIONS
 9 <130> FILE REFERENCE: -
 11 <140> CURRENT APPLICATION NUMBER: US/10/577,613A
 C--> 12 <141> CURRENT FILING DATE: 2006-04-28
 14 <160> NUMBER OF SEQ ID NOS: 14
 16 <170> SOFTWARE: PatentIn version 3.4
 18 <210> SEQ ID NO: 1
 19 <211> LENGTH: 676
 20 <212> TYPE: PRT
 21 <213> ORGANISM: Artificial
 23 <220> FEATURE:
 24 <223> OTHER INFORMATION: 1a SPA-5G-gephyrin
 27 <220> FEATURE:
 W--> 28 <221> NAME/KEY: FUSION_PRT
 29 <222> LOCATION: (1)..(676)
 30 <223> OTHER INFORMATION: fusion protein Staph. aureus Protein A and H. sapiens
 gephyrin
 32 <400> SEQUENCE: 1
 34 Ala Ala Gln His Asp Glu Ala Gln Gln Asn Ala Phe Tyr Gln Val Leu
 35 1 5 10 15
 38 Asn Met Pro Asn Leu Asn Ala Asp Gln Arg Asn Gly Phe Ile Gln Ser
 39 20 25 30
 42 Leu Lys Asp Asp Pro Ser Gln Ser Ala Asn Val Leu Gly Glu Ala Lys
 43 35 40 45
 46 Lys Leu Asn Glu Ser Gln Ala Pro Lys Ala Asp Asn Asn Phe Asn Lys
 47 50 55 60
 50 Glu Gln Gln Asn Ala Phe Tyr Glu Ile Leu Asn Met Pro Asn Leu Asn
 51 65 70 75 80
 54 Glu Glu Gln Arg Asn Gly Phe Ile Gln Ser Leu Lys Asp Asp Pro Ser
 55 85 90 95
 58 Gln Ser Ala Asn Leu Leu Ser Glu Ala Lys Lys Leu Asn Glu Ser Gln
 59 100 105 110
 62 Ala Pro Lys Ala Asp Asn Lys Phe Asn Lys Glu Gln Gln Asn Ala Phe
 63 115 120 125
 66 Tyr Glu Ile Leu His Leu Pro Asn Leu Asn Glu Glu Gln Arg Asn Gly
 67 130 135 140
 70 Phe Ile Gln Ser Leu Lys Asp Asp Pro Ser Gln Ser Ala Asn Leu Leu
 71 145 150 155 160
 74 Ala Glu Ala Lys Lys Leu Asn Asp Ala Gln Ala Pro Lys Ala Asp Asn
 75 165 170 175
 78 Lys Phe Asn Lys Glu Gln Gln Asn Ala Phe Tyr Glu Ile Leu His Leu

do NOT insert prior application data
 on invention title line
 <1507 PCT/IB04/03536
 <1517 2004-10-28
 Does Not Comply
 Corrected Diskette Needed

RAW SEQUENCE LISTING

DATE: 12/19/2006

PATENT APPLICATION: US/10/577,613A

TIME: 10:53:57

Input Set : A:\csequence listing.txt

Output Set: N:\CRF4\12192006\J577613A.raw

79		180		185		190
82	Pro Asn Leu Thr Glu Glu Gln Arg Asn Gly Phe Ile Gln Ser Leu Lys					
83		195		200		205
86	Asp Asp Pro Ser Val Ser Lys Glu Ile Leu Ala Glu Ala Lys Lys Leu					
87		210		215		220
90	Asn Asp Ala Gln Ala Pro Lys Glu Glu Asp Asn Asn Lys Pro Gly Lys					
91	225		230		235	240
94	Glu Asp Gly Asn Lys Pro Gly Lys Glu Asp Gly Asn Gly Gly Gly Gly					
95		245		250		255
98	Gly Met Ser Pro Phe Pro Leu Thr Ser Met Asp Lys Ala Phe Ile Thr					
99		260		265		270
102	Val Leu Glu Met Thr Pro Val Leu Gly Thr Glu Ile Ile Asn Tyr Arg					
103		275		280		285
106	Asp Gly Met Gly Arg Val Leu Ala Gln Asp Val Tyr Ala Lys Asp Asn					
107		290		295		300
110	Leu Pro Pro Phe Pro Ala Ser Val Lys Asp Gly Tyr Ala Val Arg Ala					
111	305		310		315	320
114	Ala Asp Gly Pro Gly Asp Arg Phe Ile Ile Gly Glu Ser Gln Ala Gly					
115		325		330		335
118	Glu Gln Pro Thr Gln Thr Val Met Pro Gly Gln Val Met Arg Val Thr					
119		340		345		350
122	Thr Gly Ala Pro Ile Pro Cys Gly Ala Asp Ala Val Val Gln Val Glu					
123		355		360		365
126	Asp Thr Glu Leu Ile Arg Glu Ser Asp Asp Gly Thr Glu Glu Leu Glu					
127		370		375		380
130	Val Arg Ile Leu Val Gln Ala Arg Pro Gly Gln Asp Ile Arg Pro Ile					
131	385		390		395	400
134	Gly His Asp Ile Lys Arg Gly Glu Cys Val Leu Ala Lys Gly Thr His					
135		405		410		415
138	Met Gly Pro Ser Glu Ile Gly Leu Leu Ala Thr Val Gly Val Thr Glu					
139		420		425		430
142	Val Glu Val Asn Lys Phe Pro Val Val Ala Val Met Ser Thr Gly Asn					
143		435		440		445
146	Glu Leu Leu Asn Pro Glu Asp Asp Leu Leu Pro Gly Lys Ile Arg Asp					
147		450		455		460
150	Ser Asn Arg Ser Thr Leu Leu Ala Thr Ile Gln Glu His Gly Tyr Pro					
151	465		470		475	480
154	Thr Ile Asn Leu Gly Ile Val Gly Asp Asn Pro Asp Asp Leu Leu Asn					
155		485		490		495
158	Ala Leu Asn Glu Gly Ile Ser Arg Ala Asp Val Ile Ile Thr Ser Gly					
159		500		505		510
162	Gly Val Ser Met Gly Glu Lys Asp Tyr Leu Lys Gln Val Leu Asp Ile					
163		515		520		525
166	Asp Leu His Ala Gln Ile His Phe Gly Arg Val Phe Met Lys Pro Gly					
167		530		535		540
170	Leu Pro Thr Thr Phe Ala Thr Leu Asp Ile Asp Gly Val Arg Lys Ile					
171	545		550		555	560
174	Ile Phe Ala Leu Pro Gly Asn Pro Val Ser Ala Val Val Thr Cys Asn					
175		565		570		575

RAW SEQUENCE LISTING

DATE: 12/19/2006

PATENT APPLICATION: US/10/577,613A

TIME: 10:53:57

Input Set : A:\csequence listing.txt

Output Set: N:\CRF4\12192006\J577613A.raw

```

178 Leu Phe Val Val Pro Ala Leu Arg Lys Met Gln Gly Ile Leu Asp Pro
179          580          585          590
182 Arg Pro Thr Ile Ile Lys Ala Arg Leu Ser Cys Asp Val Lys Leu Asp
183          595          600          605
186 Pro Arg Pro Glu Tyr His Arg Cys Ile Leu Thr Trp His His Gln Glu
187          610          615          620
190 Pro Leu Pro Trp Ala Gln Ser Thr Gly Asn Gln Met Ser Ser Arg Leu
191 625          630          635          640
194 Met Ser Met Arg Ser Ala Asn Gly Leu Leu Met Leu Pro Pro Lys Thr
195          645          650          655
198 Glu Gln Tyr Val Glu Leu His Lys Gly Glu Val Val Asp Val Met Val
199          660          665          670
202 Ile Gly Arg Leu
203          675

```

206 <210> SEQ ID NO: 2

207 <211> LENGTH: 2092

208 <212> TYPE: DNA

209 <213> ORGANISM: Artificial

211 <220> FEATURE:

212 <223> OTHER INFORMATION: 1b SPA-5G-gephyrin

215 <220> FEATURE:

216 <221> NAME/KEY: misc_recomb

217 <222> LOCATION: (1)..(2092)

218 <223> OTHER INFORMATION: nucleic acid encoding Staph. aureus Protein A and H. sapiens
 219 gephyrin fusion prt

221 <400> SEQUENCE: 2

```

222 tgctgcgcaa cacgatgaag ctcaacaaaa cgcttttttat caagtcttaa atatgcctaa      60
224 cttaaagtct gatcaacgca atggtttttat ccaaagcctt aaagatgata caagccaaag      120
226 tgctaacggt ttaggtgaag ctaaaaaatt aaacgaatct caagcaccga aagctgacaa      180
228 caatttcaac aaagaacaac aaaatgcttt ctatgaaatc ttgaacatgc ctaacttgaa      240
230 cgaagaacaa cgcaatgggt tcatccaaag cttaaaagat gacccaagtc aaagtgttaa      300
232 cctattgtca gaagctaaaa agttaaatga atctcaagca ccgaaagcgg ataacaaatt      360
234 caacaaagaa caacaaaatg ctttctatga aatcttacat ttacctaact taaacgaaga      420
236 acaacgcaat ggtttcatcc aaagcctaaa agatgacca agccaaagcg ctaacctttt      480
238 agcagaagct aaaaagctaa atgatgcaca agcaccaaaa gctgacaaca aattcaacaa      540
240 agaacaacaa aatgctttct atgaaatttt acatttacct aacttaactg aagagcaacg      600
242 taacggcttc atccaaagcc ttaaagacga tccttcagtg agcaaagaaa ttttagcaga      660
244 agctaaaaag ctaaacgatg ctcaagcacc aaaagaggaa gacaacaaca aacctggtaa      720
246 agaagacggc aacaaacctg gcaaagaaga cggtaacggc ggcggcggcg gcgtttaggt      780
248 cacagtgtg tcgatatac caaggtgggt agaagacatc gcatgtctcc ttttcctctg      840
250 acatctatgg acaaaagcct tatcacagtc ctggagatga ctccggtgct tgggacagaa      900
252 atcatcaatt accgagatgg aatggggcga gtccttgctc aagatgtata tgcaaaagac      960
254 aattttacccc ctttcccagc atcagtaaaa gatggctatg ctgtccgagc tgctgatggc     1020
256 ccaggagatc gtttcatcat tggggaatcc caagctgggt aacagccaac tcagacagta     1080
258 atgccaggac aagtcatgct ggttacaaca ggtgctccaa taccctgcgg tgctgatgca     1140
260 gtagtacaag tggaagatac cgaacttatc agggaatcag atgatggcac tgaagaactt     1200
262 gaagtgcgaa ttctggtgca agctcggcca ggccaagata tcagacccat cggccatgac     1260
264 attaaaagag gggaatgtgt tttggccaaa ggaaccacaa tgggcccttc agagattggg     1320
266 cttctggcaa ctgtaggtgt cacagaggtt gaagttaata agtttccagt ggttgcagtc     1380

```

RAW SEQUENCE LISTING

DATE: 12/19/2006

PATENT APPLICATION: US/10/577,613A

TIME: 10:53:57

Input Set : A:\csequence listing.txt

Output Set: N:\CRF4\12192006\J577613A.raw

```

268 atgtcaacag ggaatgagct gctaaatcct gaagatgacc tcttaccagg gaagattcga 1440
270 gacagcaatc gttcaactct tctagcaaca attcaggaac atggttaccc cacgatcaac 1500
272 ttgggtattg taggagacaa cccagatgac ttactcaatg ccttgaatga gggatatcagt 1560
274 cgtgctgatg tcatcatcac atcagggggt gtatccatgg gggaaaagga ctatctcaag 1620
276 caggtgctgg acattgatct tcatgctcag atccattttg gcaggggttt tatgaaacca 1680
278 ggcttgccaa caacatttgc aactttggat attgatgggt taagaaaaat aatctttgca 1740
280 ctacctgga atcctgtatc ggctgtggtc acctgcaatc tctttgttgt gcctgcaactg 1800
282 aggaaaatgc agggcatctt ggatcctcgg ccaaccatca tcaaagcaag gttatcatgt 1860
284 gatgtaaaac ttgacacctg tccagaatac catcgggtga tactaacttg gcatcaccaa 1920
286 gaaccactac cttgggcaca gagtacaggt aatcaaatga gcagccgtct gatgagcatg 1980
288 cgcagtgcc atggattgtt gatgctacct ccaaagacag aacagtacgt ggagctccac 2040
290 aaaggcgagg tgggtgatgt catggtcatt ggacggctat gatggtcacc ag 2092

```

293 <210> SEQ ID NO: 3

294 <211> LENGTH: 300

295 <212> TYPE: PRT

296 <213> ORGANISM: Artificial

298 <220> FEATURE:

299 <223> OTHER INFORMATION: 2a SPA-5G-MBP

302 <220> FEATURE:

W--> 303 <221> NAME/KEY: FUSION_PRT

304 <222> LOCATION: (1)..(300)

305 <223> OTHER INFORMATION: Fusion Protein of Staph. aureus Protein A and H. sapiens MBP

307 <220> FEATURE:

308 <221> NAME/KEY: MISC_FEATURE

309 <222> LOCATION: (264)..(264)

310 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

312 <220> FEATURE:

313 <221> NAME/KEY: MISC_FEATURE

314 <222> LOCATION: (278)..(278)

315 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

317 <220> FEATURE:

318 <221> NAME/KEY: MISC_FEATURE

319 <222> LOCATION: (281)..(281)

320 <223> OTHER INFORMATION: Xaa can be any naturally occurring amino acid

322 <400> SEQUENCE: 3

```

324 Ala Ala Gln His Asp Glu Ala Gln Gln Asn Ala Phe Tyr Gln Val Leu
325 1          5          10          15
328 Asn Met Pro Asn Leu Asn Ala Asp Gln Arg Asn Gly Phe Ile Gln Ser
329          20          25          30
332 Leu Lys Asp Asp Pro Ser Gln Ser Ala Asn Val Leu Gly Glu Ala Lys
333          35          40          45
336 Lys Leu Asn Glu Ser Gln Ala Pro Lys Ala Asp Asn Asn Phe Asn Lys
337          50          55          60
340 Glu Gln Gln Asn Ala Phe Tyr Glu Ile Leu Asn Met Pro Asn Leu Asn
341 65          70          75          80
344 Glu Glu Gln Arg Asn Gly Phe Ile Gln Ser Leu Lys Asp Asp Pro Ser
345          85          90          95
348 Gln Ser Ala Asn Leu Leu Ser Glu Ala Lys Lys Leu Asn Glu Ser Gln
349          100          105          110

```


RAW SEQUENCE LISTING

DATE: 12/19/2006

PATENT APPLICATION: US/10/577,613A

TIME: 10:53:57

Input Set : A:\csequence listing.txt

Output Set: N:\CRF4\12192006\J577613A.raw

```

352 Ala Pro Lys Ala Asp Asn Lys Phe Asn Lys Glu Gln Gln Asn Ala Phe
353      115      120      125
356 Tyr Glu Ile Leu His Leu Pro Asn Leu Asn Glu Glu Gln Arg Asn Gly
357      130      135      140
360 Phe Ile Gln Ser Leu Lys Asp Asp Pro Ser Gln Ser Ala Asn Leu Leu
361 145      150      155      160
364 Ala Glu Ala Lys Lys Leu Asn Asp Ala Gln Ala Pro Lys Ala Asp Asn
365      165      170      175
368 Lys Phe Asn Lys Glu Gln Gln Asn Ala Phe Tyr Glu Ile Leu His Leu
369      180      185      190
372 Pro Asn Leu Thr Glu Glu Gln Arg Asn Gly Phe Ile Gln Ser Leu Lys
373      195      200      205
376 Asp Asp Pro Ser Val Ser Lys Glu Ile Leu Ala Glu Ala Lys Lys Leu
377      210      215      220
380 Asn Asp Ala Gln Ala Pro Lys Glu Glu Asp Asn Asn Lys Pro Gly Lys
381 225      230      235      240
384 Glu Asp Gly Asn Lys Pro Gly Lys Glu Asp Gly Asn Gly Gly Gly Gly
385      245      250      255
W--> 388 Gly Ala Ala Ala Ser Thr Ala Xaa Ala Ser Thr Ala Lys Glu Thr Ala
389      260      265      270
392 Glu Ala Val Ala Asp Xaa Ile Leu Xaa Lys Ala Gly Pro Leu Val Ala
393      275      280      285
396 Val Ser Ala Val Ala Leu Asp Ile Thr Ala Tyr Pro
397      290      295      300
400 <210> SEQ ID NO: 4
401 <211> LENGTH: 912
402 <212> TYPE: DNA
403 <213> ORGANISM: Artificial
405 <220> FEATURE:
406 <223> OTHER INFORMATION: 2b SPA-5g-MBP
409 <220> FEATURE:
410 <221> NAME/KEY: misc_recomb
411 <222> LOCATION: (1)..(912)
412 <223> OTHER INFORMATION: nucleic acid encoding Staph. aureus Protein A and H. sapiens
MBP
413      fusion prt
415 <220> FEATURE:
416 <221> NAME/KEY: misc_feature
417 <222> LOCATION: (792)..(792)
418 <223> OTHER INFORMATION: n is a, c, g, t or u
420 <220> FEATURE:
421 <221> NAME/KEY: misc_feature
422 <222> LOCATION: (835)..(835)
423 <223> OTHER INFORMATION: n is a, c, g, t or u
425 <220> FEATURE:
426 <221> NAME/KEY: misc_feature
427 <222> LOCATION: (844)..(844)
428 <223> OTHER INFORMATION: n is a, c, g, t or u
430 <400> SEQUENCE: 4
431 tgctgcgcaa cacgatgaag ctcaacaaaa cgcttttttat caagtcttaa atatgcctaa      60

```


RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/577,613A

DATE: 12/19/2006
TIME: 10:53:58

Input Set : A:\csequence listing.txt
Output Set: N:\CRF4\12192006\J577613A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; Xaa Pos. 264,278,281
Seq#:4; N Pos. 792,835,844
Seq#:8; N Pos. 488,531,540
Seq#:9; N Pos. 440,483,492
Seq#:12; N Pos. 792,835,844

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14

VERIFICATION SUMMARY

DATE: 12/19/2006

PATENT APPLICATION: US/10/577,613A

TIME: 10:53:58

Input Set : A:\csequence listing.txt

Output Set: N:\CRF4\12192006\J577613A.raw

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:28 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:1
L:303 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:3
L:388 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:256
M:341 Repeated in SeqNo=3
L:457 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:780
M:341 Repeated in SeqNo=4
L:856 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:480
L:932 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:420
M:341 Repeated in SeqNo=9
L:1314 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:780
M:341 Repeated in SeqNo=12